

32. The apparatus according to Claim 27 further comprising a housing capable of being handheld having at least said objective lens and said window.

33. The apparatus according to Claim 27 wherein said objective lens has a numerical aperture of less than one.

34. A system for imaging and diagnosing a tissue sample for pathological applications comprising:

- an objective lens;
- a window having a surface capable of being in a pressure contact relationship with the surface of said tissue sample;
- an illumination beam which is focused by said objective lens through said window to said tissue sample, in which said objective lens receives returned light from said tissue sample representing a tissue section; and
- means for displaying said tissue section to diagnose abnormalities in said tissue sample.

35. The system according to Claim 34 wherein said abnormalities represent a tumor.

36. The system according to Claim 34 wherein said tumor represents one of carcinomas and melanomas.

37. A method for diagnosing a tumor in images of one or more sections of tissue comprising the steps of:

- placing said tissue against a window having a surface in a pressure contact relationship with the surface of said tissue;
- imaging the tissue through an objective lens to provide at least one image of a section of the tissue; and
- diagnosing in said image one or more cells of a tumor in said tissue.

38. The method according to Claim 37 further comprising the step of focusing an illumination beam with said objective lens through said window to said tissue sample.

39. The method according to Claim 38 further comprising the step of providing a light source for said illumination beam.